

WHAT IS CLAIMED IS:

1. Inbred corn seed of the corn plant 5750, a sample of said seed having been deposited under ATCC Accession No. - - - - -.

5 2. The inbred corn seed of claim 1, further defined as an essentially homogeneous population of inbred corn seed.

3. The inbred corn seed of claim 1, further defined as essentially free from hybrid seed.

10 4. An inbred corn plant produced by growing the seed of the inbred corn plant 5750, a sample of said seed having been deposited under ATCC Accession No. - - - - -.

5. Pollen of the plant of claim 4.

15 6. An ovule of the plant of claim 4.

7. An essentially homogeneous population of corn plants produced by growing the seed of the inbred corn plant 5750, a sample of said seed having been deposited under ATCC Accession No. - - - - -.

20 8. A corn plant capable of expressing all the physiological and morphological characteristics of the inbred corn plant 5750, a sample of the seed of said inbred corn plant 5750 having been deposited under ATCC Accession No. - - - - -.

25 9. The corn plant of claim 8, further comprising a factor conferring male sterility.

30 10. A tissue culture of regenerable cells of inbred corn plant 5750, wherein the tissue regenerates plants capable of expressing all the physiological and morphological characteristics of the inbred corn plant 5750, a sample of the seed of said inbred corn plant

5750 having been deposited under ATCC Accession No. - - - - -.

11. The tissue culture of claim 10, wherein the regenerable cells comprise cells derived from embryos, immature embryos, meristematic cells, immature tassels, microspores,
5 pollen, leaves, anthers, roots, root tips, silk, flowers, kernels, ears, cobs, husks, or stalks.

12. The tissue culture of claim 11, wherein the regenerable cells comprise protoplasts or callus.

13. A corn plant regenerated from the tissue culture of claim 10, wherein said corn
10 plant is capable of expressing all of the physiological and morphological characteristics of the inbred corn plant designated 5750, a sample of the seed of said inbred corn plant designated 5750 having been deposited under ATCC Accession No. - - - - -.

14. An inbred corn plant cell of the corn plant of claim 8, said cell comprising:
15 (a) an SSR genetic marker profile in accordance with the profile shown in Table 6; or
(b) a genetic isozyme typing profile in accordance with the profile shown in Table 7.

20

15. A corn seed comprising the inbred corn plant cell of claim 14.

16. A tissue culture comprising the inbred corn plant cell of claim 14.

25 17. The inbred corn plant of claim 8, comprising:

- (a) an SSR genetic marker profile in accordance with the profile shown in Table 6; or
(b) a genetic isozyme typing profile in accordance with the profile shown in Table 7.

30

18. A process of producing corn seed, comprising crossing a first parent corn plant with a second parent corn plant, wherein said first or second corn plant is the inbred corn plant 5750, a sample of the seed of said inbred corn plant 5750 having been deposited under ATCC Accession No. - - - -, wherein seed is allowed to form.

5

19. The process of claim 18, further defined as a process of producing hybrid corn seed, comprising crossing a first inbred corn plant with a second, distinct inbred corn plant, wherein said first or second inbred corn plant is the inbred corn plant 5750, a sample of the seed of said inbred corn plant 5750 having been deposited under ATCC Accession No. - - - -.

10

20. The process of claim 19, wherein crossing comprises the steps of:

- (a) planting in pollinating proximity seeds of said first and second inbred corn plants;
- (b) cultivating the seeds of said first and second inbred corn plants into plants that bear flowers;
- (c) emasculating the male flowers of said first or second inbred corn plant to produce an emasculated corn plant;
- (d) allowing cross-pollination to occur between said first and second inbred corn plants; and
- (e) harvesting seeds produced on said emasculated corn plant.

15

20

21. The process of claim 20, further comprising growing said harvested seed to produce a hybrid corn plant.

25

22. Hybrid corn seed produced by the process of claim 20.

23. A hybrid corn plant produced by the process of claim 21.

30

24. The hybrid corn plant of claim 23, wherein the plant is a first generation (F₁)

hybrid corn plant.

25. The corn plant of claim 4, further comprising a single locus conversion.

5 26. The corn plant of claim 25, wherein the single locus was stably inserted into a corn genome by transformation.

27. The corn plant of claim 25, wherein the locus is selected from the group consisting of a dominant allele and a recessive allele.

10

28. The corn plant of claim 25, wherein the locus confers a trait selected from the group consisting of herbicide resistance, insect resistance, resistance to bacterial, fungal, nematode or viral disease, yield enhancement, waxy starch, improved nutritional quality, enhanced yield stability, male sterility and restoration of male fertility.

15